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Investments in Urban Solid Waste Treatment

Adolfo Coutinho 11/04/2000

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SUMMARY

The following are good opportunities for U.S. suppliers of solid waste recycling equipment as well as for American Engineering/Consulting companies interested in bidding on public tenders to supply equipment or services in the environmental sector.

These apportunities arise from plans announced by LIPOR on October 2, 2000 to invest about \$175 million dollars during the next six years to build a new sorting center, a composting plant, six ecocenters, and more than 1,000 ecopoints in its operating area.

What is LIPOR?

The Intermunicipal Waste Treatment Service in the Oporto Region (LIPOR) is an organization with an integrated and coherent system of management, treatment and use of solid urban waste. LIPOR was established in 1982 with the partnership of five municipalities in Northern Portugal (Espinho, Gondomar, Maia, Oporto and Valongo) which were joined by the municipalities of Matosinhos (in 1984), Vila do Conde (1985) and Povoa de Varzim (1999). The total population of LIPOR's operating area is around 1 million people, as follows:

Municipalities

Espinho	37,000
Gondomar	154,000
Maia	103,000
Porto	302,000

TOTAL	966,000
Vila do Conde	65,000
Matosinhos	165,000
Valongo	90,000
Povoa de Varzim	50,000

Production and destination of Solid Waste

It is estimated that more than 420,000 tons of urban solid waste will be produced in 2000 in LIPOR's operating area. These figures are expected to increase to 651,000 tons by 2010. Of this total solid waste produced, about 81 percent goes to incineration and only 3.8 percent is recycled. The plans are to increase the recycling process to 12 percent by 2010. To achieve these aims, LIPOR plans to invest about \$175 million dollars during the next six years to build a new sorting center, a composting plant, six ecocentres, and more than 1,000 ecopoints.

The production and destination (in tons) of Solid Waste in LIPOR's operating area is estimated as follows:

	Year 2000	Year 2010
Total	420,280	650,986
Composting	(9.5%) 40,000	(9.2%)60,000
Incineration	(81%) 341,245	(73,8%) 480,325
Landfill	(5.7%) 23,950	(4.9%) 31,830
Recycling	(3.8%) 15,085	(12.1%) 78,831
Glass	9,703	35.503
Paper	3,415	30,738
Plastics	1,706	10,875
Metals	261	1,715

LIPOR's objectives

LIPOR's objectives are to manage, treat and make the best use of the 420,000 metric tons of solid urban waste produced annually in the area – an estimated daily production of 1.3 kg/person. Over the years, there has been a continuous increase in the production of waste in LIPOR's operating area, expected to reach an estimated daily production of 1.6 kg per person

by 2010. The percentage of organic waste has decreased and the production of paper, plastic, metal and glass, mainly in the form of packaging, has increased.

	Paper	Plastic	Metal	Glass	Organic	Textiles	Others	Packag
Year	%	%	%	%	%	%	%	%
1994	20.7	11.1	2.1	4.4	54.2	4	4.5	27.5
1999	23.4	11.9	2.5	4.3	47.4	4.4	6.1	29.9
2010	31.2	13.7	3.7	5.2	36.6	5.2	4.3	37.5

LIPOR considers that all forms of reduction, reuse, recycling and energy recovery of waste are fundamental for the safeguard of the environment and to preserve natural and energy resources. To achieve these aims, LIPOR runs a sorting center *(and plans to build another one)* where the materials are carefully separated (paper, plastic, glass, metal, textiles) from selected collection (Ecopoints, Ecocentres and curbside selected collection). Energy recovery is also a method of waste treatment that LIPOR has successfully implemented.

Recycling

Around 84 percent of domestic rubbish is recyclable. However, recycling can only be done if everyone participates in separating rubbish at home. Separated rubbish should be deposited in the bins for selective waste collection, namely the "Ecopoints" and "Ecocentres."

Ecopoints

Ecopoints are groups of bins for the separate collection of paper and cardboard, glass and packaging materials. In LIPOR's operating area there are 1,177 ecopoints, as follows:

Municipalities	
Espinho	25
Gondomar	80
Maia	130
Matosinhos	120
Porto	555
Povoa de Varzim	27
Valongo	85
Vila do Conde	155
TOTAL	1,177

LIPOR plans to build more than 1,000 New Ecopoints in the next six years.

Ecocentres

Ecocentres are spacious parks with large boxes and bins in which separated waste can be deposited and stored for treatment and recycling. Ecocentres are collection points for the same materials as Ecopoints, but are also designed to hold larger quantities of waste and larger articles of rubbish and/or those with characteristics that do not allow them to be deposited in the Ecopoints. Dangerous materials that cannot be collected by the normal collection rounds should also be deposited in the Ecocentres.

Twenty Ecocentres have been installed in LIPOR's operating area, as follows:

Municipalities	
Espinho	2
Gondomar	1
Maia	5
Matosinhos	5
Porto	3
Povoa de Varzim	0
Valongo	3
Vila do Conde	1
TOTAL	20

LIPOR plans to build six more Ecocentres in the next six years.

For additional information, please contact:

Robert Shipley, Senior Commercial Officer U.S. Embassy Av. Das Forcas Armadas 1600 LISBON, PORTUGAL Tel. (351-21) 770 25 26

Fax: (351-21) 726 89 14

E-mail: Robert.shipley@mail.doc.gov

Adolfo Coutinho

Environmental Technologies Commercial Specialist Commercial Services of the American Embassy Av. Boavista, 3523 - 5th Floor - Room 501 4100-139 PORTO, PORTUGAL

Tel. (351-22) 618 66 07 Fax: (351-22) 618 66 25

E-mail: Adolfo.coutinho@mail.gov

LIPOR – Intermunicipal Waste Treatment Service in the Oporto Region Bouca da Maceira, Apartado 1 4446 ERMESINDE, PORTUGAL Tel. (351-22) 977 01 00

Fax: (351-22) 975 60 38 E-mail: lipor@lipor.pt http:// www.lipor.pt

Dr. Fernando Leite, Executive DirectorDr. Fernando Melo, Executive President